

XLVII.—*Papers on Oriental Carabidæ*.—VI.

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O M O P H R O N I N I.

Omophron chelys, sp. n.

Length 4.0 mm. ; width 2.70 mm.

Testaceous; head, prothorax (except margin), and an elytral pattern dark green; clypeus, middle of front, border of prothorax and elytra, underside of head, and ventral surface (except last segment) brown; sterna and episterna piceous.

Head shiny, flat, moderately punctate at sides and back, smooth in middle, clypeus strongly bordered in front, subocular ridges extending beyond buccal fissure and curving forwards at extremity, space between them and eyes rather coarsely punctate.

Prothorax transverse, convex, shiny, base slightly bisinuate on each side, and emarginate on each side at apex; front angles acute and porrect, hind angles a little less than right, side-margin broadly reflexed, the testaceous colour extending but little inside it, a slight but noticeable break in the contour at the junction of prothorax and elytra; median line obsolete, surface moderately and uniformly punctate, reflexed margins smooth.

Elytra convex, hardly longer than wide, not much dilated behind shoulders, 15-striate-punctate, the punctures evanescent near apex, 3-4 and 7-8 not extending beyond two-thirds from base, 14 barely reaching one-third from base, intervals smooth and shiny; the green pattern is in the form of a triangular patch, broad at base, where it extends on each side to stria 8, and gradually narrowing to a point at the apex, a broad square arm is sent out on each side at about middle to stria 13, a small dark spot on interval 12 at about a sixth from apex, just opposite which the triangular patch is slightly dilated.

Underside of head and ventral surface smooth, sides of latter and whole of sterna and episterna coarsely punctate, penultimate ventral segment bordered. In the tarsi (δ) joint 1 of the front pair is in the form of an enormous oblong plate, practically as long as joints 2-5, and twice as wide as the tibiæ, pilose above, scaly beneath, joint 2 slightly dilated; joint 1 of intermediate pair elongate, as long as joints 2-4, and as wide as tibiæ.

A little larger and a little more elongate than *O. bretinghamæ*, Pasc., the puncturation of head, prothorax, and elytral striæ much coarser; the elytral pattern almost exactly reproducing that of *O. axillaris*, Chaud., but the median arms are not contracted at the junction with the main triangular patch, and the small hind arms are reduced to small spots.

British Sikkim: Gopaldhara, 3500', 1 ex., ♂ (*H. Stevens*). In my collection.

Omophron smaragdus, sp. n.

Length 6·0–6·5 mm.

Upperside dark green; front of head, clypeus, and labrum, front and side-margins of prothorax, with a patch on each side of base, a pattern on elytra, antennæ, palpi, legs (except coxæ), and apex of venter testaceous: underside more or less piceous.

Head flat, as long (with mandibles) as wide (1·9 mm.), clypeus quadrisetose (as in *O. maculosus*, Chaud.), transversely strigose in front, angularly emarginate behind, middle of front smooth, minutely striate near eyes, coarsely punctate behind, subocular ridges not reaching beyond buccal-fissure, surface between them and eyes finely rugose-striate; joint 1 of antennæ bisetose, joints 3–4 setose on outer margin.

Prothorax slightly convex, transverse (2·0 × 3·2 mm.), sides gradually narrowed in front, slightly sinuate before hind angles, all angles acute, surface coriaceous, moderately and rather irregularly punctate, with some very coarse punctures along the base.

Elytra very convex, a little longer than wide (4·2 × 4·6 mm.), sharply widened behind shoulders and then evenly rounded to apex; 15-punctate-striate, striæ fairly deep, with punctures well-marked to near apex, 3 joining 4 and 7 joining 8 at a sixth from apex, where they cease, 11 joining 12 at same level, the joint stria continuing to near apex; intervals smooth and moderately convex, more strongly so towards sides, but under a powerful lens an irregular row of minute points is visible down the centre of each interval; each elytron bears three irregular testaceous patches, the front one extending from stria 6 to margin, more or less interrupted on interval 10, and gradually widening outwards, the middle one from stria 3 to margin, more or less interrupted on intervals 6 and 10, the inner much narrower than the outer portion, the colour on 7–9 in advance of the

remainder, apical patch small, extending a little forwards on intervals 3-5 and 7-9 to the points where intervals 4 and 8 terminate, the marginal channel and in some specimens also interval 15 (and even 14) testaceous.

Beneath, the sterna, episterna, and base of venter are sparsely punctate, a setiferous pore on each side of last three ventral segments; front tarsi ♂ with joint 1 moderately dilated, as long as 2-4 together, joint 2 slightly dilated.

In general appearance strikingly like *O. maculosus*, Chaud. Head less rugose, more conspicuously punctate, the punctures less confluent; prothorax very obviously punctate and much less roughly coriaceous (in *O. maculosus* the punctures hardly show except along front margin), the green patch larger, the testaceous colour at base and sides separated (or almost so); elytra rather more strongly rounded behind shoulder, the minute puncturation of intervals much less evident, striæ rather deeper and more strongly punctate, front and middle patches not interrupted on interval 13.

Kumaon: W. Almora, 1 ex., Ranikhet, 4 ex. (*H. G. Champion*). Mr. Champion has presented the type-specimen to the British Museum.

Omophron gemma, sp. n.

Length 3.75-4.0 mm.

Upper surface dark metallic green, shiny; clypeus and labrum dark red, a spot on middle of front, side-margins of prothorax and elytra (latter with irregular inner edge), palpi, antennæ (darker at base), and legs testaceous; under surface more or less piceous, venter lighter.

Head transverse, rather flat, moderately and not very closely punctate, sparsely on front, clypeus smooth, bisetose, strongly bordered in front, arcuate behind, subocular ridge extending beyond buccal fissure, surface between it and eye coarsely punctate; joint 1 of antennæ unisetose, joints 3-4 glabrous on outer margin.

Prothorax convex, strongly transverse, base bisinuate on each side, front angles very acute, hind angles only slightly acute, sides gradually contracted from base to apex, the general contour hardly broken at point where they join elytra, margins narrowly explanate and nearly smooth, general surface moderately punctate, a little more sparsely on disk, testaceous border narrow, but widening towards apex.

Elytra very convex, as wide as long (2.6 mm.), moderately rounded behind shoulders and evenly rounded to apex; striæ

rather finely punctate-striate, 1-12 clearly marked at base, 13-14 represented by one or two punctures only, 11-12 disappearing at a half, and all striæ becoming evanescent at two-thirds from base, intervals flat and smooth; the testaceous border extends at base to stria 11, contracts midway to 12, expands sharply to 8, contracts again to about 10, and reaches apex by a rather irregular curved line.

Beneath, the sterna are coarsely punctate, the metasternum sparsely, metepisterna and base of ventral surface with a few very coarse punctures; front tarsi ♂ with joint 1 moderately dilated, as long as 2-4 together, joint 2 slightly dilated.

Very near *O. bretteinghamæ*, Pasc., but a little larger and of a brighter green colour, the testaceous border narrower and with a more jagged inner ridge. Head more closely and more coarsely punctate, prothorax more closely punctate, clytral striæ and punctures deeper, testaceous border dentate (inwardly) just behind middle, and again near apex (in *O. bretteinghamæ* the inner margin of this border is gently undulating).

Kumaon: W. Almora (*H. G. Champion*), 7 ex., ♂ ♀. Mr. Champion has presented the type-specimen to the British Museum.

CARABINI.

Carabus sanchari, sp. n.

Length 19·0-24·0 mm.

Black, with faint æneous reflection on upper surface.

Head fairly broad, longer than wide (3·8 × 4·5 mm. with mandibles), flat, frontal foveæ short but moderately deep, not quite reaching front of clypeus, surface coarsely and confluent rugose-punctate; clypeus and middle of front (nearly) smooth, neck swollen, labrum a little emarginate, eyes moderately prominent, antennæ reaching to basal fifth of elytra, setose from joint 5, joint 2=4, 3 and 4 strongly constricted at base, mandibles strong but not elongate, a bifid tooth on each at about middle, maxillary palpi with penultimate and last joints equal, last joint of all palpi moderately dilated towards apex and truncate, but with edges of truncature rounded, mentum with a simple tooth, rounded and a little dilated at apex, as long as lobes.

Prothorax quadrate, transverse (3·75 × 4·75 mm.), widest at about a third from apex, rather deeply emarginate in front, base truncate but bent back close to hind angles, a little wider than apex; sides gently rounded in front and

lightly sinuate behind, a well-marked border along front margin and sides, narrowly reflexed and slightly crenulate along latter, visible only at sides of base, front angles inconspicuous, hind ones rather sharply rounded, projecting downwards and backwards; median line well-marked, basal foveæ rudimentary, surface coarsely and confluent rugose-punctate, a little less closely on front of disk.

Elytra (7.5 × 12.5 mm.) elongate-ovate, convex, sides rather strongly rounded, contracted towards base, widest at about three-fifths from base, shoulders rounded, border narrow and very slightly reflexed, without sinuation before apex; striæ faintly punctured, three primary intervals, each with about ten punctures, of same width as intervals, a minute tubercle in front of each puncture, secondary and tertiary intervals of equal width, their evenness broken by slight ill-defined tubercles and depressions, a little narrower than primaries, apical fourth very irregularly sculptured and, with the sides, including marginal channel, minutely tuberculate.

On the underside the prosternal process is wide and flat, the mesosternum deeply hollowed in middle, the metepisterna a little wider than long, and the ventral segments with only a vestige of a border. In the front tarsi (♂) there are four dilated joints.

Of specialized setæ there are:—one on each side of the labrum, and a row of 8 along the front margin, one on each side of the clypeus and one supraorbital, none beneath the head; two marginal at each side of prothorax, one at apical third and the second at some little distance before hind angle; ventral segments with one on each side of median line, apical segment on each side with one marginal towards base, and 2 (♂), 3 (♀), near apex; hind coxæ with two, one behind the other, intermediate tibiæ thickly clothed externally with reddish hairs.

At first sight not unlike *C. indicus*, Fairm., but the head and prothorax much more coarsely sculptured, and the sides of the elytra more rounded. Head much wider, eyes less prominent, joint 4 of antennæ much shorter and thicker, and (like ♂) constricted at base; prothorax quadrate, flatter, hind angles widely rounded; elytra more regularly striate, without minute irregular raised lines between the main intervals, margin without trace of sinuation before apex. The elytra are very much like those of *C. wallichii*, Hope, but the striæ in the latter are more regular and more evenly disposed, without any minute tubercles except near the apex.

Sikkim: Gnatong and "beyond Jalep," ♂ ♀. I am indebted to Mr. René Oberthür for examples of this new species.

Carabus wallichii, Hope, Zool. Misc. 1831, p. 21.

In commenting on this species (Trans. Ent. Soc. Lond. 1919, p. 171), I pointed out that the type agreed with the description of *C. indicus*, Fairm. I was not at that time aware of the paper published by Dr. Roeschke in the volume for 1900 of 'Entomologische Nachrichten.' In this he says quite rightly (p. 59) that the quaternary intervals in *C. wallichii* are wanting, and he puts down *indicus* as a variety.

Having now seen the type of Fairmaire's species, I agree with Dr. Roeschke, and indeed there are differences which Fairmaire's description hardly brings out. In *C. wallichii* the prothorax, instead of being finely rugose-punctate, is rather coarsely, though shallowly, punctate; the elytra are wider and more rounded at the sides, widest behind middle, the striæ distinctly crenulate, the intervals considerably wider, and the so-called quaternary intervals entirely wanting. I have seen no other example of *Carabus* from Nepal.

Reitter says of the subgenus *Meganebrius*, Kraatz ('Bestimmungs-Tabelle der europäischen Coleopteren, Carabini,' 1896, pp. 191-2), in which *C. indicus*, Fairm., is placed, "prothorax in front with at least two, generally with three lateral setæ." I am unable to confirm this from my own observation; I have in my collection a single example with two setæ close together on each side, but in all the other examples I have seen from Sikkim there has been only one. In *C. wallichii* the setæ have disappeared, and owing to the general puncturation I cannot now determine how many original setiferous pores (if any) there may have been.

SIAGONINI.

Siagona cyathodera, sp. n.

S. punctulata, Bates (not Chaud.), Ann. Mus. Civ. Gen. 1892, p. 285.

Length 22.0 mm.

Black, shiny, with greyish pubescence. Winged.

Head (with mandibles) a little longer than wide (4.6 × 5.0 mm.), moderately convex, fairly closely punctate, more sparsely on disk, constriction of neck only moderately deep, neck smooth except for a very few small punctures at sides; frontal ridges thickened and rounded in front, attenuated

behind, not fractured, eyes moderately prominent, antennæ reaching middle of elytra, supra-maxillary plates large, rather square in front but with angle rounded, mandibles small, bordered at base on the outside, striate on the inside.

Prothorax transverse (4.0×6.0 mm.), disk rather flat, sides convex, apex slightly and widely emarginate, sides very strongly rounded from apex to basal sinuation; lateral grooves deep, almost interrupted in middle, curved slightly inwards at base, bent sharply outwards near apex, median line sharply incised, lying at the bottom of a fairly deep longitudinal depression; puncturation fairly close, much finer than on head, less close between median line and lateral grooves, much closer along margins of base and apex.

Elytra (6.8×12.4 mm.) flat, regularly elongate-oval, shoulders evident but not prominent, closely aciculate-punctate and pubescent, very closely near margin, a raised oblique line (outwards and backwards) across shoulder on each side, along which are half-a-dozen large setiferous pores, a few similar pores along sides and near apex, and a row of them, slightly interrupted in middle, in marginal channel.

A good deal larger than *S. punctulata*, Chaud. (which measures from 16.0–18.0 mm. in length), but differing chiefly in the form of the prothorax, which is wider and much more sharply contracted both in front and behind. The head is relatively larger, the clypeal suture deeper, and the constriction of the neck shallower; the prothorax, in addition to its greater width and more rounded sides, is more deeply channelled along the median line, and is less closely punctate; the elytra are relatively longer, and also less closely punctate.

Upper Burma: Bhamo, 3 ex. (*ex coll. Fea*), in my collection.

Siagona pygmaea, sp. n.

Length 8.5 mm.

Dark red, legs a little lighter, moderately shiny; head (except neck), a longitudinal stripe on each side of the prothorax, margins and suture of elytra, as also a vague shade on the disk, piceous. Pubescence yellowish, fairly short. Apterous.

Head a little longer than wide (1.7×2.1 mm.), small, slightly convex, frontal ridges entire, rounded in front, not reaching beyond eyes behind, surface moderately and rather

closely punctate, neck rather deeply constricted, finely punctate, supra-maxillary plates small, converging forwards, rounded in front, eyes very small and inconspicuous from above, antennæ exceptionally thick and long, reaching slightly beyond middle of elytra, mandibles small, bordered externally.

Prothorax a little transverse (2.0×2.4 mm.), flat, widely emarginate at apex, sides gently rounded in front, more strongly behind, the front angles rounded; lateral grooves moderately deep near base and apex, interrupted in middle, median line extremely fine, surface moderately, closely, and nearly uniformly punctate.

Elytra of same width as prothorax (4.4 mm. long), regularly oval, flat, shoulders strongly rounded, surface moderately and closely punctate, humeral ridge nearly obsolete, a few large setiferous pores on shoulders and along sides.

Rather smaller than *S. flesus*, F., and otherwise coloured, quite without the large piceous patch on the disk of the elytra, the puncturation of head and prothorax finer. Head smaller, but otherwise similar; prothorax with finer median line, front angles more conspicuous, lateral grooves much deeper in front, where they bend round towards the angles; elytra shorter, shoulders even more rounded, surface a little more coarsely and closely punctate.

Bombay: Belgaum district, 3 ex., which I took during the rains in 1886.

Siagona kulla, sp. n.

Length 7.75–8.50 mm.

Piceous, moderately shiny, antennæ, ventral surface, and legs (except femora) dark red. Pubescence yellowish, fairly short. Winged.

Closely allied to *S. pygmæa* just described, but differing (apart from coloration) in the following particulars:—*Head* with the supra-maxillary plates parallel and wider, the eyes more conspicuous. *Prothorax* more coarsely and less closely punctate, the front angles more broadly rounded and less prominent, lateral grooves less deeply impressed in front, disk depressed behind on each side of median line. *Elytra* a little longer and a little less flat, shoulders less rounded, the puncturation identical. Insect winged.

Central Provinces: Nagpur (*E. A. D'Abreu*). Several examples. Mr. D'Abreu has kindly allowed me to retain the type in my collection.